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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,288	08/20/2003	Ralph James	501297.01	7179

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Kimton N. Eng, Esq.
DORSEY & WHITNEY LLP
Suite 3400
1420 Fifth Avenue
Seattle, WA 98101

EXAMINER	
ELMORE, REBA I	

ART UNIT	PAPER NUMBER
2189	

DATE MAILED: 03/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/645,288	JAMES, RALPH	
	Examiner	Art Unit	
	Reba I. Elmore	2189	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 August 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-47* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 4-7, 10-14, 17-20, 23-29 and 32-47* is/are rejected.

7)☒ Claim(s) *2,3,8,9,15,16,21,22,30 and 31* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-47 are presented for examination.

2. Applicant is reminded that an Applicant's duty to disclosure of material and information is not satisfied by presenting a patent examiner with 'a mountain of largely irrelevant (material) from which he is presumed to have been able, with his expertise and with adequate time, to have found the critical (material). It ignores the real world conditions under which examiners work. Rohm & Haas Co. v. Crystal Chemical Co., 722 F.2d 1556, 1573 (220 USPQ 289) (Fed. Cir. 1983), cert. denied, 469 US 851 1984 (Emphasis in orginal). Patent Applicant has a duty not just to disclose pertinent prior art references but to make a disclosure in such a way as not to 'bury' it within other disclosures of less relevant prior art; See Golden Valley Microwave Foods Inc. v. Gealer Popcorn Co. Inc., 24 USPQ2d 1801 (N.D. Ind. 1992)., Molins PLC v. Textron Inc. 26 USPQ2d 1889, at 1889 (D.Del. 1992)., Penn Yan Boats, Inc. v. Sea Lark Boats, Inc. et al., 175 USPQ 260, at 272 (S.D.FI. 1972).

Eliminate clearly irrelevant and marginally pertinent cumulative information. If a long list is submitted, highlight those documents which have been specifically brought to

Applicant's attention and/or are known to be of most significance. See Penn Yan Boats, Inc. v. Sea Lark Boats, Inc. 359 F. Supp 948, 175 USPQ 260 (S.D.Fla. 1972), aff'd, 479 F.2d 1338, 178 USPQ 577 (5th Cir. 1973), cert. denied, 414 US 874 (1974). But cf. Molins PLC v. Textron Inc., 48 F.3d 1172, 33 USPQ2d 1823 (Fed. Cir. 1995).

Please note that it is the applicant's duty to particularly point out any highly relevance material amongst the references cited in the IDS. A cursory review of the submitted references was performed by the examiner under the condition noted above.

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SPECIFICATION

3. There are numerous patent applications cited but not included in the references cited on the prior art 1449s submitted by the Applicant now given as related applications in the specification section 'Cross-References to Related Applications' (See 37 CFR 1.78 and MPEP § 201.11) needs to be added to the specification with an explanation of the relevance of each related application. The given related applications have been included on prior art PTO-892 forms in order to provide a complete written record of the prosecution of this patent application.

4. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 6, 7, 11, 14, 17-19, 24, 27-28, 33, 37-41 and 43-47 are rejected under 35 U.S.C. 102(b) as being anticipated by Ellis.

7. Ellis teaches the invention (claims 1, 7, 14, 19, 28, 37 and 43) as claimed including a memory system comprising:

a CPU (e.g., see Figures 2 and 4);

system controller (e.g., see Figure 2);

an input device (e.g., see Figures 2 and 4);

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an output device (e.g., see Figures 2 and 4);

a storage device (e.g., see Figures 2 and 4);

a plurality of memory devices as multiple RDRAM modules for the RIMM cards which are fast memory devices and capable of being used in a high speed communications system (e.g., see Figures 4 and 5A-5B);

a memory hub (e.g., see Figure 4);

a reception interface receiving data words and capturing the data words in response to a first clock signal in a first time domain and provide groups of captured data words on an output in response to a second block signal in a second time domain with the interface being equivalent to the memory controller which provides various clock signals for testing memory modules by receiving and transmitting data based on different timing signals (e.g., see col. 8, line 28 to col. 10, line 40);

a transmission interface coupled to the reception interface for receiving captured data words in response to a third clock signal in the first time domain and provides the captured data words on an output with the interface circuitry of the controller being equivalent to the memory controller which both receives and transmits data and which provides various clock signals for testing memory modules by receiving and transmitting data based on different timing signals (e.g., see col. 8, line 28 to col. 10, line 40); and,

local circuitry coupled to the output of the reception interface for receiving the groups of data words, the local control circuitry develops memory requests corresponding to the groups of data words with the interface circuitry of the controller being equivalent to the memory controller which both receives and transmits data and which provides various clock signals for

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testing memory modules by receiving and transmitting data based on different timing signals (e.g., see col. 8, line 28 to col. 10, line 40).

As to claims 6, 11, 18, 24, 33, 37 and 43, Ellis teaches the memory controller can inherently receive and transmit data words either upstream to the control circuitry or downstream to the control circuitry.

As to claim 17, Ellis teaches the bypass path has conductive lines coupled between the physical reception and transmission ports as being inherent as all circuitry paths has conductive lines in order to receive and transmit data words.

8. Ellis teaches the invention (claim 14) as claimed including a memory module comprising:

a plurality of memory devices as multiple RDRAM modules for the RIMM cards (e.g., see Figures 4 and 5A-5B);

a memory hub (e.g., see Figure 4);

a physical reception port for receiving data words (e.g., see col. 8, line 28 to col. 10, line 40);

a bypass path coupled to the physical reception port as the test circuitry being separate from the RIMM sockets 1 and 3 of Figure 9;

a physical transmission port coupled to the bypass path (e.g., see col. 8, line 28 to col. 10, line 40); and,

local control circuitry coupled to the physical reception port and the memory devices as the memory controller (e.g., see Figure 9).

As to claims 38-39 and 44-45, Ellis teaches the data words are either read or write commands which are both memory requests as being inherent as all computer systems use read and write commands for accessing memory systems.

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As to claim 40 and 46-47, Ellis teaches the second clock signal comprises a delayed version of the first clock signal (e.g., see col. 12, lines 21-37).

35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 4-5, 12-13, 20, 25-27, 29, 34-36 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ellis.

11. Independent claims 1, 7, 19, 28 and 37 are rejected as being anticipated by Ellis as given above.

As to claims 4-5, 12-13, 20, 25-26, 29, 34-35, Ellis does not specifically teach the reception interface and transmission interface further comprises optical interface circuitry corresponding to the data words and converting the received optical signals into corresponding electrical signals or the transmitted data words for electrical signals to optical signals, however, the reference has the capability of using interfaces which provide conversions for optical signals and this technology is now old in the memory arts and official notice is taken thereof. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use different types of receive/transmit signals including optical interface circuitry because this type of interface circuitry is well known in the memory arts. Without further details being given including specific limitations providing further differentiation for using a specific signaling

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medium with the interface circuitry, this limitation is taught to the limit required by the actual claim language.

As to claims 27, 36 and 42, Ellis does not specifically teach a daisy-chain configuration. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a daisy-chain configuration because this type of configuration is well known in the memory arts. Without further details being given including specific limitations providing further differentiation for using a specific configuration with the interface circuitry, this limitation is taught to the limit required by the actual claim language.

12. Claims 10, 23 and 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ellis in view of the Direct Rambus Technology Disclosure.

13. Independent claims 7, 19 and 28 are rejected as being anticipated by Ellis as given above.

14. As to claims 10, 23, 32, Ellis does not specifically teach the memory devices are SDRAMS, however, the reference teaches using RDRAM devices which are also synchronous memory devices and faster typically than regular SDRAM devices. The direct RAMBUS reference teaches the equivalency of the RDRAM devices to the SDRAM devices. It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the RDRAM devices of the primary reference with SDRAM devices as shown in the secondary reference because the memory modules are equivalent as given in the secondary reference.

CLAIM OBJECTIONS

15. Claims 2-3, 8-9, 15-16, 21-22 and 30-31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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CONCLUSION

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Reba I. Elmore, whose telephone number is (571) 272-4192. The examiner can normally be reached on Monday or Wednesday from 7:30am to 6:00pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the art unit supervisor for AU 2189, Reginald G. Bragdon, can be reached for general questions concerning this application at (571) 272-4204. Additionally, the official fax phone number for the art unit is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Tech Center central telephone number is (571) 272-2100.

Reba I. Elmore
Primary Patent Examiner
Art Unit 2189

Sunday, March 19, 2006

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